

ARIZONA YOUNG MEN TRAIN AT PRESIDIO CAMP

Five hundred young men including 12 Arizonans, representing 40 colleges and schools of Montana, Utah, New Mexico, Arizona, Nevada, Idaho, Washington, Oregon and California, are enrolled in the reserve officers' training corps camp at the Presidio of San Francisco this summer. Fifty army officers and an equal number of non-commissioned officers, who are assigned as instructors and assistants in military training at educational institutions, have been detailed to duty at the camp, which opened June 21 and will close August 2.

During these six weeks the cadets will be given systematic instruction in rifle practice, tactics, musketry and bayonet combat, which can be better taught at a military camp than at their schools or colleges, as well as in the fine points of drill. They are also given a carefully planned course of physical training, including games and athletic contests. A feature of the camp is the week of target practice at the Port Darry rifle range where each cadet is required to take the prescribed army course of rifle firing. From the cadets making the best scores will be chosen a team of 14 to represent this camp at the national rifle match at Caldwell, N. J., in August, the successful contestants receiving a transcontinental trip with all expenses paid by the government.

The work of the cadets is intensive, but is varied by entertainments provided by the Red Cross, the war camp community service and other agencies of San Francisco who arrange dances, theater parties, excursions on San Francisco bay, trips to local points of interest and other diversions for the young men on Saturday afternoons and Sundays. It is the aim of Colonel Pierce A. Murphy, the commanding officer, to send the cadets to their homes at the close of the camp better men physically than when they came, and with a fund of enthusiasm which will make itself felt in their schools during the coming year.

Arizona is well represented at the R. O. T. C. having 12 cadets enrolled there, coming from the following schools:

University of Arizona, senior basic class; Joseph N. Eichenbaum, Douglas; Thomas J. Randolph, Elmer; Walter W. Wofford, Yorktown, Texas.

New Mexico Military Institute, Roswell, N. M., senior basic course: Paul J. Alkire, Phoenix; Gordon G. Glor, Nogales; Charles S. Wiso, Nogales; Harold H. Hillman, Naco; Harry B. Nelson, St. Johns; Francis W. Pool, Winkelman; Frank E. Saunders, Pinto; Jean D. Scott, Douglas; Richard S. B. Washington, Douglas.

Harvard school, Los Angeles, junior basic course; William H. Sawtelle, Tucson.

SANTA BARBARA TO SHOW PRIZE DOGS

The best dogs in the west will be exhibited at the forthcoming Santa Barbara bench show. It will be held in the palm ring, on the Belvedere grounds, August 1 and 2, under rules of the American Kennel club. Entries close on July 21. It is expected that no less than 200 dogs will be benched.

As some of the finest dogs of the Pacific coast have been entered the competition promises to be of unusual interest. It will give an opportunity to get some idea of the quality of local canines. Those who know predict that they will more than hold their own.

There will be local classes, in which competition is limited to dogs owned in Santa Barbara and Ventura counties. This is for the purpose of interesting local dog owners who do not have confidence enough in their animals to pit them against outside talent. In a recent show at Stockton, the local class drew out 75 entries. Here there will be separate competition for Santa Barbara county dogs and those from Ventura county.

Trophies to the value of \$5,000 will be awarded to the winners. There will be 80 handsome cups and several gold medals. The classification list provides for the entry of all recognized breeds. There will be one novelty in the way of "muffs," under which heading boys and girls can show their "just daws" of no particular standing. The famous dogs of the films, such as Roscoe Arbuckle's "Lucky," Mack Sennett's "Keystone Teddy" and others will be on show at Santa Barbara.

UNION HEADS ORDER PHONE WORKERS BACK

SAN FRANCISCO, July 18.—Orders to all striking telephone workers on the Pacific coast to resume work Monday morning at 8 o'clock were sent tonight by L. C. Grasser, international vice president of the electrical brotherhood, and Miss Nellie Johnson, international vice president of the telephone operators.

The strike executive committee shortly afterwards sent telegrams to their locals asking that the order to return be heeded.

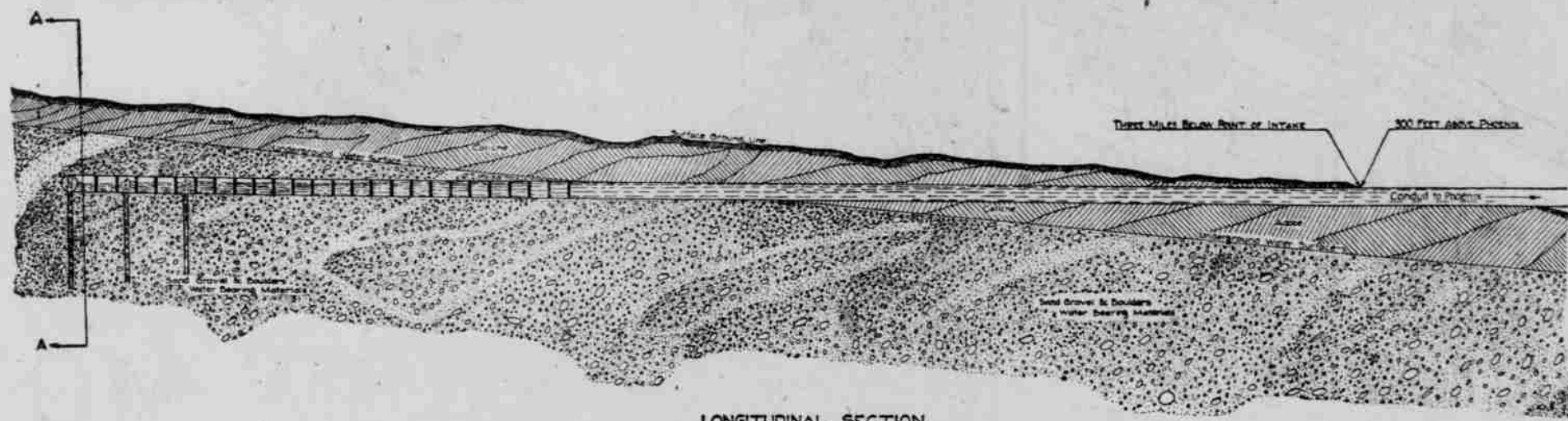
The strike committee telegraphed its request to disavow the order after a delegation sent to interview D. F. Fullerton, representing the company, reported him as declaring that, except for retroactive pay, any decision by the federal wire control would be binding on the company only during the existence of the board. After that the compromise offer of the company to the workers would prevail, he was quoted as saying.

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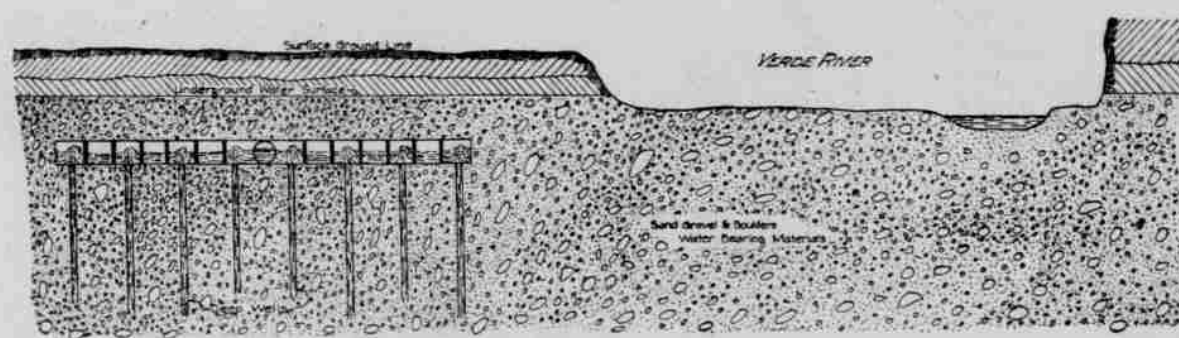


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Intake Works and Location of Proposed Verde Water Supply Conduit From the Intake to Phoenix



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FOR

THE PROPOSED VERDE RIVER GRAVITY WATER SUPPLY FOR THE CITY OF PHOENIX

FOREWORD BY CITY COMMISSION

Only after careful consideration of investigations and reports covering a period of more than thirteen years has the present City Commission decided to afford the people an opportunity for meeting the dire need of the City for an adequate supply of pure, soft water.

The quality of the water, the availability and adequacy of the supply, together with original cost and expense of operating the plant—the paramount questions in considering the project—have all been passed upon by experts and given their unqualified approval. Every factor germane to the proposed water supply has been given careful painstaking consideration by both former and present city officials.

By approval of the \$1,300,000 bond issue for construction of the proposed gravity line from the Verde River, Phoenix will be guaranteed a sufficient supply of pure, soft water. And, in the opinion of John C. Sparks, a consulting chemist of paramount authority, "the quality of the Verde water is not materially surpassed by any supply elsewhere throughout the country."

INVESTIGATIONS AND CONCLUSIONS

That the necessity for pure, soft water in Phoenix has long been recognized is demonstrated by the fact that the pioneer effort to secure such a supply was made more than thirteen years ago. Investigations have been conducted over a long period of time by experts of national prominence and by men who are locally known to have particular ability in engineering and water problems. The unanimous conclusion reached is that the Verde River supply will meet every requirement of Phoenix for pure, soft water.

Fowler Is Pioneer

As early as 1906, Lincoln Fowler, who was at that time chairman of the Water Works Board, employed Alexander Potter, a Consulting Engineer of New York, to design a Water Works System for the City of Phoenix, including mains, hydrants and either a pumping or gravity system from which Phoenix might secure a pure water supply.

Potter's Conclusions

Mr. Potter, considered the pumping proposition from wells in the vicinity of Phoenix, also wells located north of Phoenix in what is now known as the "Orangewood District." For a gravity supply the Hassayampa River, the Agua Fria and the Verde Rivers were considered. Mr. Potter unqualifiedly recommended to the Water Board the Verde River as the only source from which it was practical for Phoenix to secure a supply of soft water in the quantity that would meet all commercial requirements.

Thompson Investigates

In 1912 V. A. Thompson, then Superintendent of the Water Works, made extensive investigations of every proposed source of supply that had been suggested, satisfying himself that the Verde River was the only practical source from which Phoenix could obtain water that would be satisfactory in both quality and quantity. After reaching these conclusions, Hiram Phillips, a noted Water Works and Consulting Engineer of St. Louis, Missouri, was employed to investigate the proposed sources of supply and report to the City Council his findings in solving the domestic water question for Phoenix.

Phillips and Reed

Mr. Phillips recommended that we secure some local engineer to make an extensive investigation and compile statistics on all the proposed sources from which water might be secured. Howard S. Reed was employed to do this work, and he made extensive investigations of Seven Springs, the Cave Creek, the Agua Fria, the Hassayampa River, Queen Creek and the Verde River. It was Mr. Reed's opinion that the Verde River was the only practical source from which Phoenix could secure an adequate water supply, and that the quantity and quality of the water was satisfactory. Mr. Phillips then returned to Phoenix and made extensive personal investigations, checking Mr. Reed's report, and agreed with both Mr. Reed and Mr. Potter that the Verde River proposition should be developed.

Practical Tests

In 1916, R. A. Craig, City Manager, and J. B. Girard, City Engineer, made further investigations. Their work extended to practical tests to determine the quantity of water available and the quality of the water to be had when used in large volumes; also of making a preliminary survey of a pipe line location from the intake site on the Verde River to Phoenix. The quantity of water developed was sufficient, the quality was satisfactory and the preliminary survey demonstrated that the building of a pipe line from the Verde River to Phoenix would not be a difficult matter.

Eminent Experts

After these investigations were completed, Wm. L. Church, Consulting Engineer of New York City, was employed to make further investigations and check up the reports and tests made by the former engineer, taking samples of the water from the Verde River to New York City to be analyzed. His conclusions, including that of John C. Sparks, Consulting Chemist and until recently Official Chemist of the Board of Water Supply of New York City, are as follows:

Their Conclusions

"I have read with care the full reports previously made to you by Messrs. Alexander Potter, of New York; Howard S. Reed, of Phoenix; and Hiram Phillips, of St. Louis. As you are in possession of all the facts therein set forth, these reports need no extended review on my part.

"It is evident that the practicable supply is limited to one of these sources, to-wit: the Hassayampa River, distant 59 miles; the Agua Fria Canyon, distant 35 miles; and the Verde River. This excludes the other suggestions of Queen Creek, Cave Creek, etc., which are wholly inadmissible on account of insufficient supply, even if otherwise available.

"Of the three principal sources above mentioned you have already no doubt convinced yourselves that the only practical one is a gravity supply taken from the sub-surface flow of the Verde River at a point substantially 33 miles by the pipe line above your City. The considerations governing are briefly summarized below.

"One consideration which may blanket all others is that you already have a clear title to an adequate water supply at that point. A corresponding title to a supply from either of the other two rivers would undoubtedly involve long and costly litigation.

"A primary governing consideration is of course the quality of the water. Various analyses of all these waters are before you and are further confirmed by the analysis made on this date by

John C. Sparks, of New York, Consulting Chemist, a copy of which is appended to this report. Mr. Sparks is of paramount authority on this subject, and may add is the Official Chemist for the Board of Water Supply for the City of New York and of many other cities.

"The Verde River is not only superior to both the others mentioned as a potable water—and vastly superior to your present supply—but it is especially notable for its freedom from the sulphates which form the permanent boiler scales. The carbonates forming the soft scale are present but in small quantity and are easily precipitated if necessary. Of chlorides there is a negligible trace. In all these respects I do not recall that the Verde water is materially surpassed by any supply within my knowledge elsewhere throughout the country.

"Unlike either of the other sources, the Verde water will require neither sedimentation nor filtration, since it is taken from an under-flow through a stratum of open sand and gravel 21 to 23 feet below the ground surface.

"A third governing consideration is the available quantity. In this respect the Verde rates with or above the other rivers named, although exact comparisons are not possible nor indeed necessary. The fact remains that your test-well, drained by a 6-inch centrifugal pump, together with various borings, has demonstrated a widely extended water-bearing stratum with an under-flow far in excess of your maximum requirements."

Phoenix, June 28, 1919.

Orangewood District

Mr. L. B. Hitchcock, City Engineer,
City of Phoenix,
Phoenix, Arizona.

My Dear Hitchcock:

Replying to your letter of June 15th as to the adequacy of the soft water supply in the Orangewood district:

The well which the railroad company put down in Orangewood is only 140 feet deep. We cased off the water from the first strata (which contained more or less alkali), this being a distance of approximately eighty to ninety feet below the surface, then went through impervious material into a bed of slate where we encountered a good flow of soft water.

When not pumping, this water stands 23' 4" from the surface of the ground. We pump approximately 199,000 gallons per day at the rate of 250 gallons per minute and after a few minutes' pumping the draw-down amounts to seven feet where it remains during pumping operations.

I am of the opinion that there is not enough of this soft water in the strata of slate to furnish a supply for a city the size of Phoenix and that if the well were deepened to any considerable extent to increase the supply you would break through the slate formation into gravel, thereby encountering the same class of water in the gravel below the slate as is being pumped from the city wells at the present time. As to how deep the soft-water-bearing slate strata is, we do not know, and this could only be determined by putting down a test hole.

Yours very truly,

(Signed) C. M. SCOTT.

COST VERSUS BENEFITS

In considering the proposed improvement, taxpayers should bear in mind that after the installation of the new system the increase in the annual tax rate will be only 8 cents on \$100.00. To the average home owner who is assessed \$4,000.00 this will mean less than 1 cent per day.

Assured of pure, soft water, the average taxpayer of Phoenix will not consider the cost—his verdict will be "cheap at any price." There are, however, many taxpayers who will give the proposed project careful consideration before voting the bond issue. They will want to weigh the costs thereof as against the benefits to be derived therefrom.

Bearing this in mind, persons interested in comparison should consider:

- First—Improvement in quality of water over present supply.
- Second—Decrease in operating expenses of the City Water Department.
- Third—Decrease in wear and tear on the plant due to quality of water in the mains.
- Fourth—Decrease in plumbing bills, because of increased life of fixtures, due to purity of new water supply.

- Fifth—Decrease in the present necessary use of soaps and water softeners.
- Sixth—Increased wearing life of linens, flannels and other fabrics, due to quality of new water.
- Seventh—Increase in life of steam boilers, hot water heaters, automobile motors and radiators.

In dollars and cents the following table is interesting:

Annual interest on cost of constructing of Verde Project	\$65,000.00
Annual operating expense of Verde Project	5,000.00
Total	\$70,000.00
Saving in pumping expense	30,000.00
Increased revenue to Water Department	15,000.00
Saving in depreciation on present plant	20,000.00
Saving in Insurance Rates	20,000.00
Total	\$85,000.00

In addition to the above yearly saving of \$15,000.00, it is estimated that the decrease in plumbing bills annually will amount to \$10,000.00; saving in soaps and water softeners, \$20,000.00 and saving by reason of the increased life of linens, flannels and other fabrics, \$15,000.00.

It is very generally predicted that the population of Phoenix will double in the next ten years. Should this occur, and conditions at the present time fully warrant the belief, the revenue of the Water Department will be increased \$100,000.00 per year.

However, leaving out of consideration of any growth in the population, if pure, soft water from the Verde River is secured, the annual rentals of the Water Department will be increased \$15,000.00. This increased revenue will be obtained from cold storage and ice plants, laundries, hotels and manufacturing plants generally.

Note:—Further information concerning the proposed bond issue and water supply may be secured by addressing V. A. Thompson, City Manager, Phoenix, Arizona.

It Is Proposed To Be Accomplished With The \$1,300,000 Bonds To Be Voted On July 26